

# Operator Manual

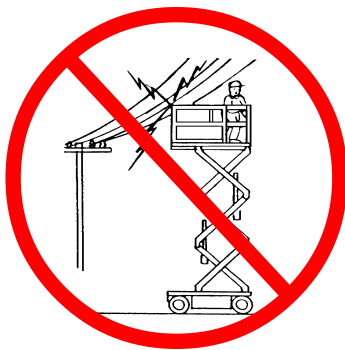
## **XRT Series**

SERIAL NO. 1001 TO CURRENT

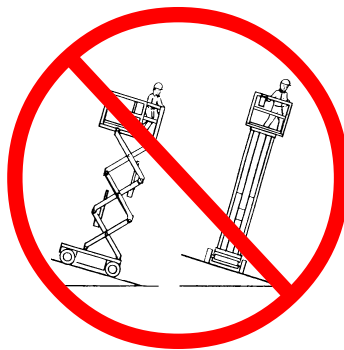
### **WARNING**

All personnel shall carefully read, understand and follow all safety rules, operating instructions and the Scaffold Industry Association's **MANUAL OF RESPONSIBILITIES (ANSI A92.6)** before operating or performing maintenance on any UpRight aerial work platform.

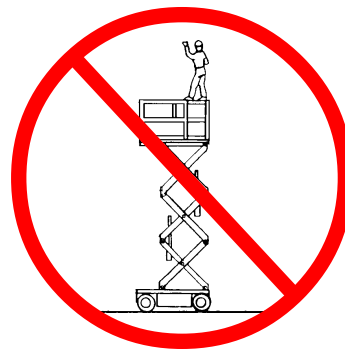
### **SAFETY RULES**



**NEVER** operate the machine within ten feet of power lines. **THIS MACHINE IS NOT INSULATED.**



**NEVER** elevate or drive elevated on uneven slopes or soft ground or elevate the platform unless the platform is level.



**NEVER** sit, stand or climb on guardrail or midrail.

**NEVER** operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps and debris.

**NEVER** operate the machine if all guardrails are not properly in place and secured with all fasteners properly installed.

**SECURE** and lock gate after mounting platform.

**NEVER** use ladders or scaffolding on the platform.

**NEVER** attach overhanging loads or increase platform size.

**MAINTAIN** tire pressure at 65 psi (unless foam filled). Check daily.

**LOOK** up, down and around for overhead obstructions and electrical conductors.

**DISTRIBUTE** all loads evenly on the platform. See the back cover for maximum platform load.

**NEVER** use damaged equipment. (Contact UpRight for instructions. See toll-free phone number on back cover.)

**NEVER** change operating or safety systems.

**INSPECT** the machine thoroughly for cracked welds, loose hardware, hydraulic leaks, damaged control cable, loose wire connections and wheel bolts.

**NEVER** climb down elevating assembly with the platform elevated.

**NEVER** perform service on machine while platform is elevated without blocking elevating assembly.

**NEVER** recharge battery near sparks or open flame; batteries that are being charged emit highly explosive hydrogen gas.

**AFTER USE** secure the work platform against unauthorized use by turning key switch off and removing key.

**NEVER** replace any component or part with anything other than original UpRight replacement parts without the manufacturer's consent.

#### **California Proposition 65 Warning**

Gasoline and diesel engine exhaust and some of their constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

## Introduction

This manual covers all models of the XRT Series Work Platforms. This manual must be stored on the machine at all times.

## Pre-Operation and Safety Inspection

Carefully read, understand and follow all safety rules, labels, and operating instructions, then perform the following steps each day before use.

1. Open modules and inspect for damage, oil leaks or missing parts.
2. Check the hydraulic oil level sight gauge on the hydraulic tank with the platform fully lowered. Add hydraulic oil if necessary (see Specifications, Page 10).
3. Check that fluid level in the battery is correct (see Battery Maintenance, Page 8).
4. Check the engine oil level and fuel level.
5. Check that all guardrails are in place, the slide out deck extension is secured with the pin and all fasteners are properly tightened.
6. **XRT 27/33 (unless foam filled):** Check tire pressure; 65 psi (4,5 bar).
7. Carefully inspect the entire work platform for damage such as cracked welds or structural members, loose or missing parts, oil leaks, damaged cables or hoses, loose connections and tire damage.
8. Move machine, if necessary, to unobstructed area to allow for full elevation.
9. Place chassis and platform emergency stop switches in the ON position (Figure 1 & 2) by pulling the buttons out.
10. Verify platform/chassis switch is on **PLATFORM** (Figure 1).
11. **Gasoline / Propane Models:** set dual fuel selector to desired position. Set to the center position to purge the system when switching fuels. If the machine is to be operated on propane, open the supply valve on the tank.

**Note:** When using LP gas, use clean, water free liquid petroleum gas, preferably from a bulk storage tank. Follow the instructions located on the power module tray for filling the tank.



### WARNING



If you smell propane, close the supply valve on the tank immediately until you have located and corrected the leak.

12. While the engine is cool check the engine coolant level.



### CAUTION



DO NOT check coolant when engine or radiator is hot, hot coolant can cause severe burns.

## System Function Inspection



### WARNING



**STAND CLEAR** of the work platform while performing the following checks.

Before operating the work platform survey the work area for surface hazards such as holes, drop-offs, bumps and debris.

Check in **ALL** directions, including above the work platform, for obstructions and electrical conductors.

Protect control console cable from possible damage while performing checks.

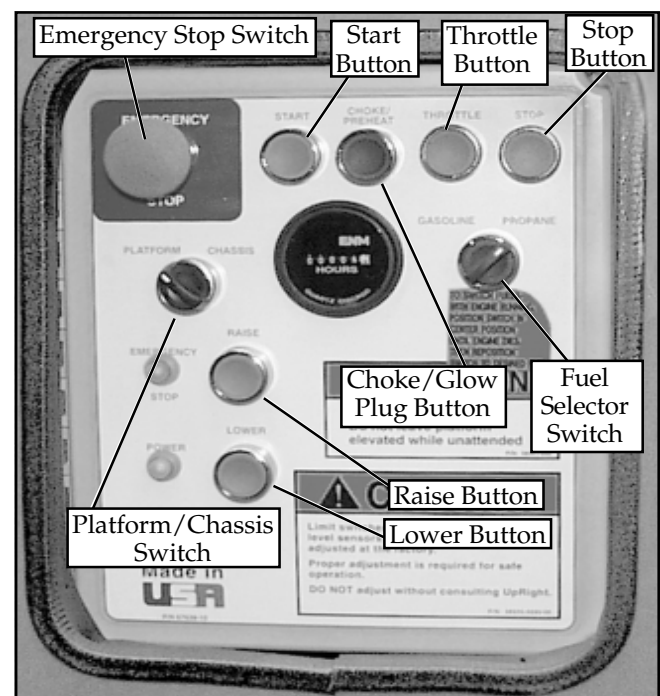


Figure 1: Chassis, Left Side

1. Unhook controller from front guardrail. Firmly grasp controller hanger in such a manner that the interlock lever can be depressed, while performing the following checks from the ground.
2. Turn controller key switch clockwise to **ON**. Turn fully clockwise to start engine, releasing the key once the engine starts.

**Note: If the engine is cold, on dual fuel models, depress and hold the choke button in while starting the engine. On diesel models, depress and hold the glow plug button for 6 seconds to engage the glow plugs.**

3. Position drive/lift switch to **DRIVE** position.
4. With the speed range switch first in **HIGH TORQUE** and then again in **HIGH SPEED** depress the interlock lever and slowly push the control lever to **FORWARD** then **REVERSE** positions to check for speed and directional control. The farther you push or pull the control lever the faster the machine will travel.

**Note: On 4-wheel drive machines, the Speed Range Switch has three positions; HIGH TORQUE, Middle Position (not labeled), and HIGH SPEED. Perform step 4 for each speed.**

5. Push steering switch **RIGHT** then **LEFT** to check for steering control.
6. Re-hook controller on front guardrail.
7. Turn the platform/chassis switch to **CHASSIS**.
8. Push the throttle button in. Push chassis raise button to elevate platform while pushing the tilt sensor (Figure 1) off of level. The platform should only partially elevate and the tilt alarm should sound. If the platform continues to elevate and/or there is no alarm **STOP** and remove the machine from service until it is repaired.

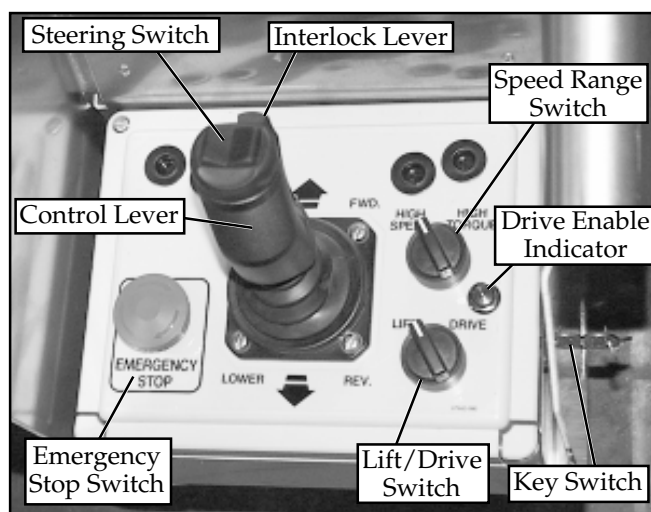


Figure 2: Controller

9. Release the tilt sensor and fully elevate platform.
10. Visually inspect the elevating assembly, lift cylinder, cables and hoses for damage or erratic operation. Check for missing or loose parts.
11. Lower the platform partially by pushing in on the chassis lower switch, and check operation of the audible lowering alarm.
12. For **XRT27**, open the chassis emergency lowering valve (Figure 4) to check for proper operation by pulling and holding the knob out. Once the platform is fully lowered, close the valve by releasing the knob.
13. For **XRT33**, operate Emergency down system by holding control valve in closed position then pumping up pressure to release cylinder valves. Release control valve to stop lowering.
14. Turn the platform/chassis switch to **PLATFORM**.
15. Mount the platform making sure the gate is latched.
16. Position drive/lift switch to **LIFT**.
17. Depress the interlock lever and slowly push the control lever to **RAISE** to raise the platform, fully actuate the control lever to check proportional lift speed. Elevate the platform to 12 feet (3.7 m).
18. Slowly pull control lever to **DOWN** position to lower platform. Check that lowering alarm sounds.
19. Turn controller key switch to **OFF**, push the emergency stop button and dismount the platform.
20. Close and secure module covers.



Figure 3: Controller

## Operation

**Before** operating work platform, ensure that the pre-operation and safety inspection has been completed, any deficiencies have been corrected and the operator has been thoroughly trained on this machine.

### Travel With Platform Lowered

1. Verify chassis emergency stop switch is in the ON position (turn counterclockwise), the drive enable indicator is on, and that the platform/chassis switch is on **PLATFORM**.

**Note: If the drive enable indicator is off, verify that the platform is fully lowered.**

2. After mounting platform, secure the chain (close and latch gate on Euro machines). Check that guardrails are in position and properly assembled with fasteners properly torqued.
3. Check that route is clear of persons, obstructions, holes and drop-offs and is capable of supporting the wheel loads.
4. Check clearances above, below and to the sides of the platform.
5. Pull controller emergency stop button out to ON position.
6. Turn controller key switch fully clockwise to start engine, releasing the key once the engine starts.

**Note: If the engine is cold, on dual fuel models, depress and hold the choke button in while starting the engine. On diesel models, depress and hold the glow plug button for 6 seconds to engage the glow plugs.**

7. Set the drive speed range switch to;  
2-wheel drive - **HIGH TORQUE**  
4-wheel drive - Middle Position.
8. Grasp the control lever so the interlock lever is depressed (releasing the interlock lever cuts power to controller). Slowly push or pull the control lever to **FORWARD** or **REVERSE** to travel in the desired direction. The farther you push or pull the control lever from center the faster the machine will travel.
9. While moving, push the drive/lift speed range switch to **HIGH SPEED** for travel on level surfaces or to **HIGH TORQUE** for climbing grades or traveling in confined areas.
10. On 4-wheel drive machines, use **HIGH TORQUE** position for steep grades or muddy conditions where more torque is required.

### Steering

1. Push the steering switch **RIGHT** or **LEFT** to turn the wheels. Observe the tires while maneuvering to insure proper direction.

**Note: Steering is not self-centering. Wheels must be returned to the straight ahead position by operating the steering switch.**

### Raising and Lowering the Platform

1. Position the drive/lift switch to **LIFT**.
2. While holding the control lever so the interlock lever is depressed, push the control lever slowly to **UP** to raise the platform. Pushing the control lever farther increases the lift speed.
3. When the work task is completed, position the drive/lift switch to **LIFT** and lower the platform by pulling back on the control lever until the platform is fully lowered.

### Travel with Work Platform Elevated

Travel with platform elevated **ONLY** on firm and level surfaces.

**Note: The work platform will travel at reduced speed when in the elevated position.**

1. Check that the route is clear of persons, obstructions, holes and drop-offs, is level and capable of supporting the wheel loads.
2. Check clearances above, below and to the sides of platform.
3. Position the drive/lift switch to the **DRIVE** position.
4. Push the control lever to **FORWARD** or **REVERSE** for the desired direction of travel.

**If the machine quits driving and the tilt alarm sounds, immediately lower the platform and move the machine to a level location before re-elevating the platform.**

## Emergency Lowering - XRT27

The emergency lowering control is located at the rear of the machine at the base of the scissor assembly, (Figure 4).

1. Open the emergency lowering valve by pulling on the knob and holding it on XRT27.
2. Once the platform is fully lowered, release the knob to close the valve.



Figure 5: Emergency Lowering Valve Knob (XRT27)

## Emergency Lowering - XRT33

The emergency lowering control is located in the control module and is accessible through the fuel tank access window, (Figure 5).

1. Hold the control valve in the closed position, then pump up pressure to release holding valves on the cylinders.
2. Once the platform is fully lowered, release the control valve to close the holding valves.

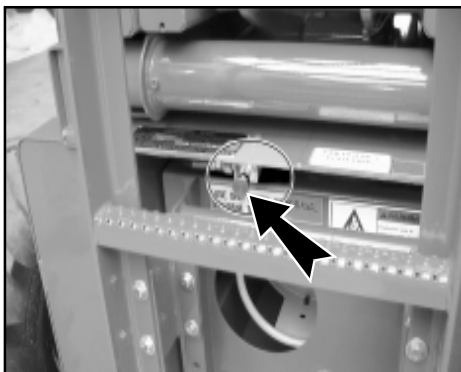


Figure 4: Emergency Lowering Valve Knob (XRT33)

## Switching Fuels (Dual Fuel Only)

1. With engine running turn the fuel selector switch (Figure 1) to the center position.
2. After the engine has quit running select the appropriate fuel supply.
3. Restart the engine.

## After Use Each Day

1. Ensure that the platform is fully lowered.
2. Park the machine on level ground, preferably under cover, secure against vandals, children or unauthorized operation.
3. Turn the key switch to **OFF** and remove the key to prevent unauthorized operation.

## Parking Brake Release (Figure 6)

Perform the following only when the machine will not operate under its own power and it is necessary to move the machine or when winching onto a trailer to transport.

1. Close the needle valve by turning the knob clockwise.
2. Pump the brake release pump until the parking brakes release and the wheels can be turned.
3. The machine will now roll when pushed or pulled.
4. Be sure to open the needle valve and verify that the parking brakes have engaged before the machine is operated.

⚠WARNING⚠

Never operate work platform with the parking brakes released. Serious injury or damage could result.

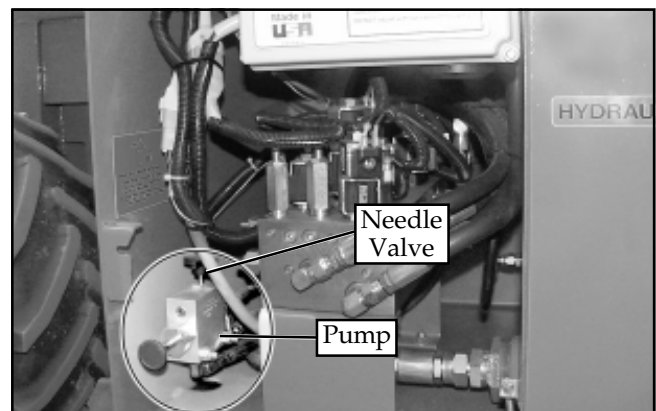


Figure 6: Parking Brake Release Pump

## Fold Down Guardrails

This procedure is only for passing through doorways. Guardrails must be returned to proper position before using the machine.

### Fold Down Procedure (Figure 7)

**Note:** When performing the following procedures retain all fasteners.

1. Ensure that the slide out deck extension is fully retracted and deck pin is locked. Place the controller on the platform.
2. Pull the pins on the two end gate arms. Lower the rear gate to the floor. Replace the pins.
3. Pull the pins (2) on the left side of the front rail and swing the front rail back against the right handrail. Insert pins into right handrail.
4. Lift the right handrail up, then lower it to the extension deck floor.
5. Push the deck extension handle into locked position. Lift the left handrail up, then lower it on top of the right handrail.
6. Rotate the arms in against handrails.
7. Lift the right main handrail and lower to the floor.
8. Lift the left main handrail and lower it on top of right hand rail.



## WARNING



Before operating machine, guardrails must be securely fastened in their proper position.

### Erection Procedure

1. Reverse the fold down procedure.
2. Hang the controller from front guardrail.
3. Before operating the work platform, check that all fasteners are in place.

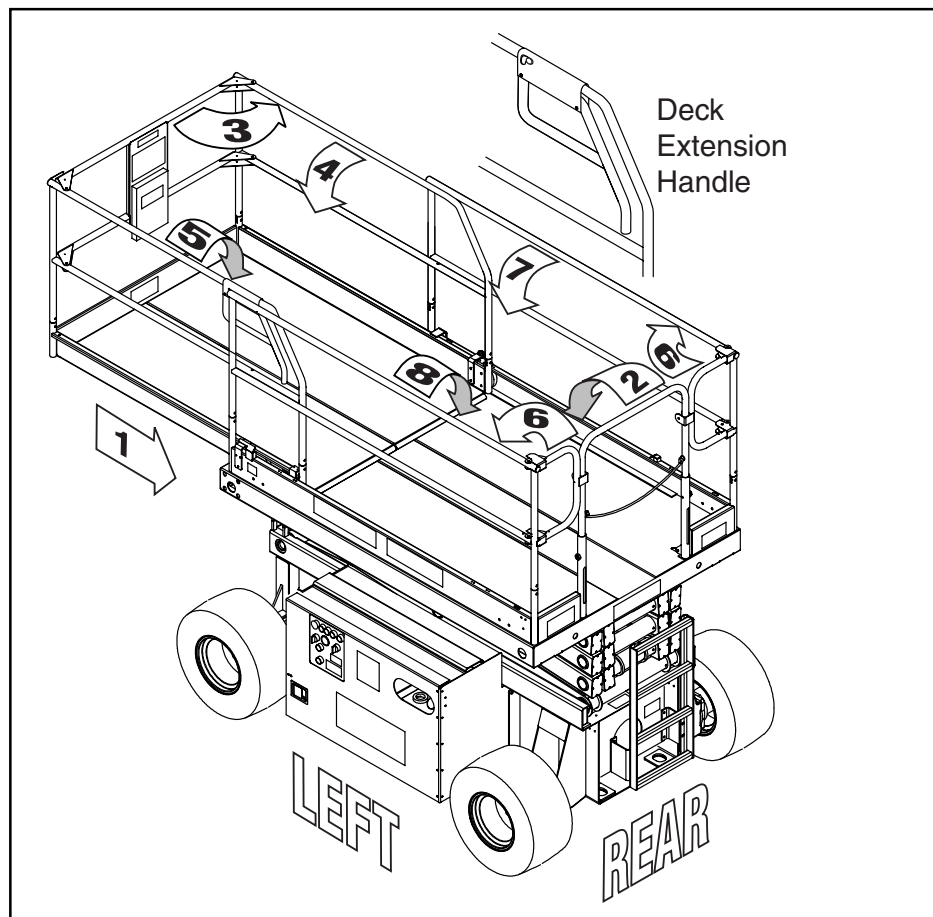


Figure 7: Fold Down Guardrails



## ***Transporting Work Platform***

### **By Crane**

1. Secure straps to chassis tie down/lifting lugs only (Figure 8 & 9).

### **By Truck**

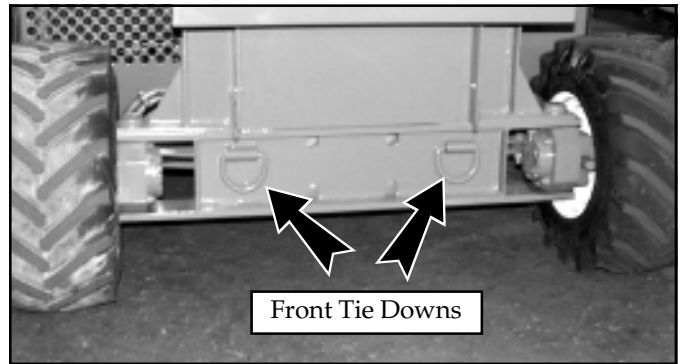
1. Maneuver the work platform into transport position and chock wheels.
2. Secure the work platform to the transport vehicle with chains or straps of adequate load capacity attached to the chassis tie down/lifting lugs (Figure 8 & 9).



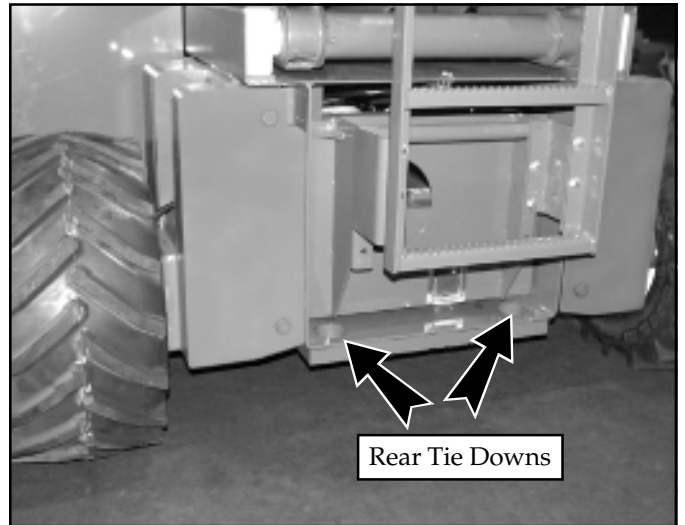
### **CAUTION**



Overtightening of chains or straps through tie down lugs may result in damage to work platform.



**Figure 8: Transporting Work Platform**



**Figure 9: Transporting Work Platform**

## Maintenance



### WARNING



Never perform service on the work platform in the elevating assembly area while platform is elevated without first blocking the elevating assembly.

DO NOT stand in elevating assembly area while deploying or storing brace.

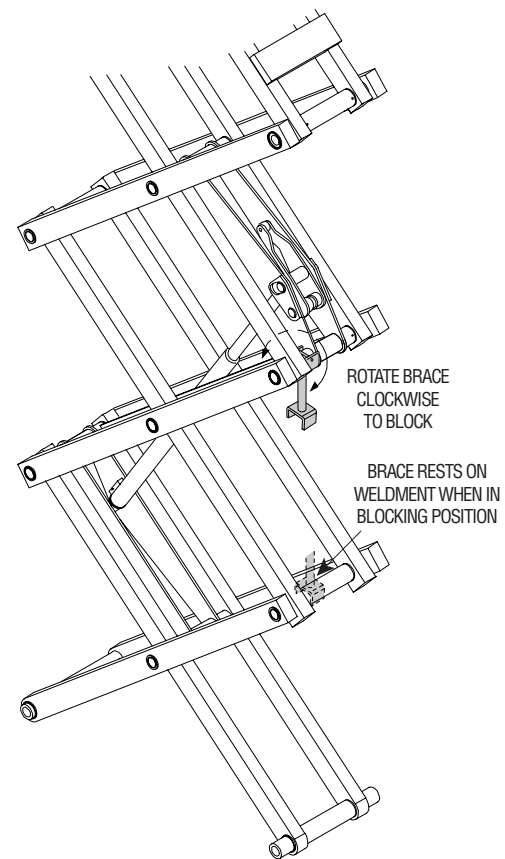
### Blocking Elevating Assembly (Figure 10)

#### Installation

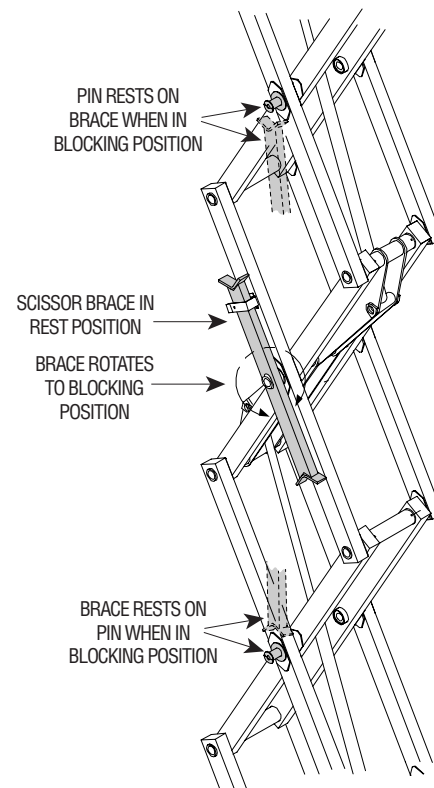
1. Park the work platform on firm level ground.
2. Verify platform emergency stop switch is ON.
3. Turn platform/chassis switch to **CHASSIS**.
4. Start the engine using the chassis controls.
5. Push the throttle button in, the button will stay in and the engine speed will increase. Using the raise button, elevate platform until the scissors brace can be rotated to the vertical position.
6. **XRT33**-From the left side of the machine, disengage the locking pin securing the brace. Rotate the scissor brace counterclockwise until it is vertical and between the two scissor center pivots.
7. **XRT27**-From rear of machine, lift the scissor brace from its stowed position. Rotate upward and outward then down until it is hanging vertical below its attachment point.
8. Push lower button and gradually lower platform until brace is supporting the platform.
9. Disengage throttle by pushing throttle button in again, the button will retract and the engine will come to idle speed.

#### Removal

1. Using chassis controls, gradually raise platform until the scissors brace clears the two scissor center pivots.
2. **XRT33**-Rotate scissors brace clockwise until the locking pin engages.
4. **XRT27**- Rotate scissor brace outward and upward over its mounting point until it rests in the stowed position.
3. Push lower button to completely lower platform.
4. Make sure the throttle button is disengaged and platform/chassis switch is on **PLATFORM**.



XRT27



XRT33

Figure 10: Blocking Elevating Assembly



## Battery Maintenance



### WARNING



Hazard of explosive gas mixture. Keep sparks, flame and smoking materials away from batteries.

Always wear safety glasses when working with batteries.

Battery fluid is highly corrosive. Rinse away any spilled fluid thoroughly with clean water.

Always replace batteries with UpRight batteries or manufacturer approved replacements weighing 62 lbs. each.

The battery is located in the slide out tray (see Figure 11). The slide out tray is located at the rear of the machine. Reach through the ladder to pull the release latch, then pull the tray towards you (see Figure 12).

Check battery fluid level daily, especially if work platform is being used in a warm, dry climate.

If electrolyte level is lower than 3/8 in. (10 mm) above plates add distilled water only. DO NOT use tap water with high mineral content it will shorten battery life.

Keep terminals and tops of batteries clean.

Refer to the Service Manual to extend battery life and for complete service instructions.

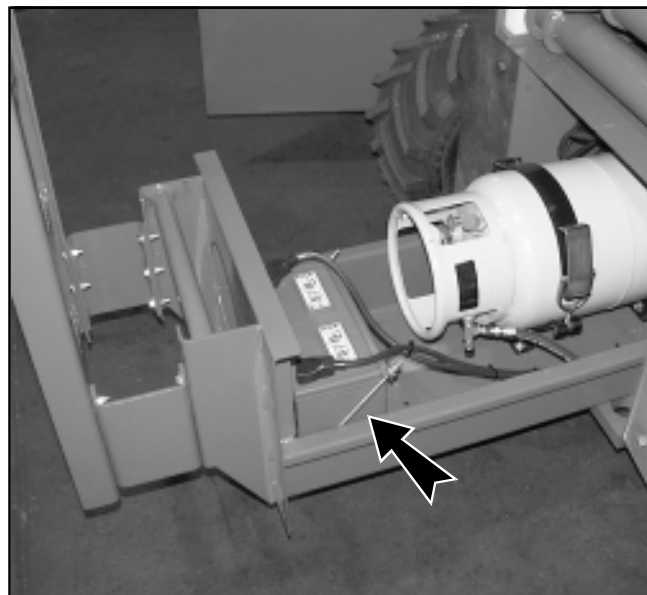


Figure 11: Battery Location (battery cover not shown)

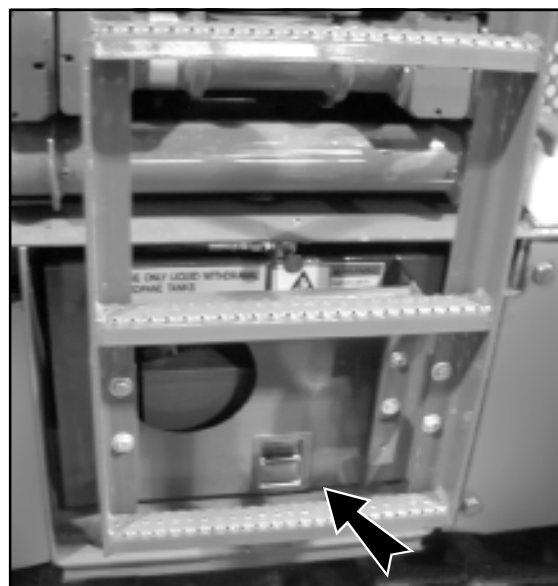


Figure 12: Slideout Tray Release

## Routine Service

Use the following table as a guide for routine maintenance. **Inspection and maintenance shall be performed by personnel who are trained and familiar with mechanical and electrical procedures.** Refer to the Service Manual for complete service instructions.

Please copy this page and use the Routine Service Table as a checklist when inspecting a machine for service.

## Routine Service Table Key

### Interval

Daily=each shift (every day) or every eight hours

30d=every month (30 days) or every 50 hours

3m=every 3 months or 125 hours

6m=every 6 months or 250 hours

1y=every year or 500 hours

2y=every 2 years or 1000 hours

Y=Yes / Acceptable

N=No / Not Acceptable

R=Repaired / Acceptable

## Routine Service Table

COMPONENT	INSPECTION OR SERVICES	INTERVAL	Y	N	R
Engine Oil	Check level and condition	Daily			
	Check for leaks	Daily			
	Change oil & filter (Dual Fuel)	30d			
	Change oil & filter (Diesel)	100HOURS			
Engine Fuel System	Check fuel level	Daily			
	Check for leaks	Daily			
	Replace fuel filter	6M			
	Check air cleaner	Daily			
Engine Battery System	Check electrolyte level	Daily			
	Check specific gravity	30d			
	Clean exterior	6M			
	Check battery cable condition	Daily			
Engine Coolant	Clean terminals	6M			
	Check coolant level (with engine cold)	Daily			
Hydraulic Oil	Replace coolant	3M			
	Check oil level	Daily			
	Change filter	6M			
Hydraulic System	Drain and replace oil	2y			
	Check for leaks	Daily			
	Check hose connections	30d			
Emergency Hydraulic System	Check hoses for exterior wear	30d			
	Operate the emergency lowering system and check for serviceability	Daily			
Controller	Check switch operation	Daily			
Control Cable	Check the exterior of the cable for pinching, binding or wear	Daily			
Platform Deck and Rails	Check fasteners for proper torque	Daily			
	Check welds for cracks	Daily			
	Check condition of deck	Daily			
Tires	Check for damage	Daily			
	Check air pressure (unless foam filled) (65psi) (4,5 bar)	Daily			
	Check lug nuts (torque to 90 ft. lbs. [123 Nm])	30d			
Hydraulic Pump	Wipe clean	30d			
	Check for leaks at mating surfaces	30d			
	Check for hose fitting leaks	Daily			
	Check mounting bolts for proper torque	30d			
Drive Motors	Check for operation and leaks	Daily			
Steering System	Check hardware & fittings for proper torque	6M			
	Oil all pivot points	30d			
	Check steering cylinder for leaks & mounting bolts for proper torque	30d			

COMPONENT	INSPECTION OR SERVICES	INTERVAL	Y	N	R
Elevating Assembly	Inspect for structural cracks	Daily			
	Check pivot points for wear	30d			
	Check pivot pin mounting bolts for proper torque	30d			
Chassis	Check scissor arms for bending	6M			
	Check hoses for pinch or rubbing points	Daily			
	Check component mounting for proper torque	6M			
	Check welds for cracks	Daily			
Lift Cylinder	Check the cylinder rod for wear	30d			
	Check pivot pin mounting bolts for proper torque	30d			
	Check seals for leaks	30d			
	Inspect pivot points for wear	30d			
	Check fittings for proper torque	30d			
Entire Unit	Check for and repair collision damage	Daily			
	Check fasteners for proper torque	3M			
	Check for corrosion-remove and repaint	6M			
	Lubricate	30d			
Labels	Check for peeling, missing, or unreadable labels & replace	Daily			

## Service Report

Date: \_\_\_\_\_

Owner: \_\_\_\_\_

Model No: \_\_\_\_\_ Serial No: \_\_\_\_\_

Served By: \_\_\_\_\_

Service Interval: \_\_\_\_\_

[illegible]

11

## Specifications\*

ITEM	XRT27	XRT33
<b>Platform Size</b> (Inside Toeboards) Standard w/ Extension	58 in. x 90.5 in. [1,47 m x 2,34 m] 58 in. x 103.5 in. [1,47 m x 2,62 m]	58 in. x 90.5 in. [1,47 m x 2,34 m] 58 in. x 103.5 in. [1,47 m x 2,62 m]
<b>Max. Platform Capacity</b> Standard w/ Extension on Extension	1,250 lbs. [567 kg] 1,250 lbs. [567 kg] 250 lbs. [113 kg]	1,000 lbs. [454 kg] 1,000 lbs. [454 kg] 250 lbs. [113 kg]
<b>Max. No. of occupants</b> Standard on Extension	4 people 1 people	3 people 1 people
<b>Height</b> Working Height Max. Platform Height Min. Platform Height	33 ft. [10,1 m] 27 ft. [8,2 m] 27 in. [8,2 m]	39 ft. [12 m] 33 ft. [10,1 m] 33 in. [10,1 m]
<b>Dimensions</b> Weight, Standard 2WD 4WD w/ Extension 2WD 4WD Overall Width Overall Height (Rails Folded) Overall Height (Rails Up) Overall Length, Standard	7,000 lbs. [3175 kg] 7,000 lbs. [3175 kg] 7,000 lbs. [3175 kg] 7,000 lbs. [3175 kg] 69in. [1,75 m] 69.5 in. [1,8 m] 98.5 in. [2,5 m] 106 in. [2,72 m]	8,167 lbs. [3704 kg] 8,167 lbs. [3704 kg] 8,167 lbs. [3704 kg] 8,167 lbs. [3704 kg] 69 in. [1,75 m] 76 in. [1,9 m] 105 in. [2,7 m] 106 in. [2,72 m]
<b>Driveable Height</b>	27 ft. [8,2 m]	33 ft. [10,1 m]
<b>Surface Speed</b> Platform Lowered Platform Raised	0 to 4 mph [0 to 6,4 km/h] 0 to 0.45 mph [0 to ,73 km/h]	0 to 4 mph [0 to 6,4 km/h] 0 to 0.45 mph [0 to ,73 km/h]
<b>System Voltage</b>	12 Volt DC	12 Volt DC
<b>Hydraulic Tank Capacity</b>	16.25 Gallons [74 l]	16.25 Gallons [74 l]
<b>Max Hydraulic System Pressure</b>	3200 psi [220,7 bar]	3200 psi [220,7 bar]
<b>Hydraulic Fluid</b> Normal > 32 °F [0 °C] Low Temp. < 32 °F [0 °C] < 0 °F [-17 °C]	ISO #46 ISO #32 ISO #15	ISO #46 ISO #32 ISO #15
<b>Lift System</b>	One Single Stage Lift Cylinder	Two Single Stage Lift Cylinders
<b>Lift Speed</b>	Raise, 27 sec./Lower, 31 sec.	Raise, 40 sec./Lower, 37 sec.
<b>Power Source</b> Diesel Gasoline	Kubota D905E Kohler	Kubota D905E Kohler
<b>Drive Control</b>	Proportional	Proportional
<b>Horizontal Drive</b> 2WD 4WD	2 Hyd. Wheel Motors 4 Hyd. Wheel Motors	2 Hyd. Wheel Motors 4 Hyd. Wheel Motors
<b>Tires (unless foam filled)</b>	26 X 12-10 ply, 65psi [4,5 bar]	26 X 12-10 ply, 65psi [4,5 bar]
<b>Parking Brakes</b>	Spring Applied, Hydraulic Release, Multiple Disc	Spring Applied, Hydraulic Release, Multiple Disc
<b>Turning Radius</b> (inside)	5'8" in. [1,7 m]	5'8" in. [1,7 m]
<b>Maximum Gradeability</b> 2WD 4WD	30% [16,7°] 40% [21.8°]	26% [ 35% [19,3°]
<b>Wheel Base</b>	78 3/8 in. [2 m]	78 3/8 in. [2 m]
<b>Guardrails</b>	44 in. [1.1 m] high, Fold Down with gate.	44 in. [1.1 m] high, Fold Down with gate.
<b>Toeboard</b>	6 in. [152 mm] High	6 in. [152 mm] High

\* Specifications subject to change without notice.

Refer to Service Manual for complete parts and service information.

Meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1990

## FOR MORE INFORMATION

**UpRight**

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PARTS: (888) UR-PARTS  
PARTSFAX: (209) 896-9244  
1775 Park St., Selma, CA 93662  
<http://www.upright.com>

Local Distributor:

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